

(A)

$$2^{-1} =$$

$$5^{-1} =$$

$$10^{-1} =$$

$$\pi^{-1} =$$

$$\sqrt{2}^{-1} =$$

$$6^{-1} =$$

(D)

$$4^{\frac{1}{2}} =$$

$$9^{\frac{1}{2}} =$$

$$16^{\frac{1}{2}} =$$

$$25^{\frac{1}{2}} =$$

$$8^{\frac{1}{3}} =$$

$$27^{\frac{1}{3}} =$$

$$64^{\frac{1}{3}} =$$

$$125^{\frac{1}{3}} =$$

(B)

$$\left(\frac{1}{3}\right)^{-1} =$$

$$\left(\frac{1}{5}\right)^{-1} =$$

$$\left(\frac{1}{8}\right)^{-1} =$$

$$\left(\frac{1}{9}\right)^{-1} =$$

(E)

$$8^{\frac{2}{3}} =$$

$$16^{\frac{3}{2}} =$$

$$16^{\frac{3}{4}} =$$

$$125^{\frac{2}{3}} =$$

(C)

$$\left(\frac{2}{5}\right)^{-1} =$$

$$\left(\frac{3}{2}\right)^{-1} =$$

$$\left(\frac{2}{17}\right)^{-1} =$$

$$\left(\frac{5}{8}\right)^{-1} =$$

(F)

$$\left(\frac{4}{9}\right)^{-\frac{3}{2}} =$$

$$8^{-\frac{2}{3}} =$$

$$\left(\frac{1}{16}\right)^{-\frac{3}{2}} =$$

$$\left(\frac{125}{27}\right)^{-\frac{2}{3}} =$$

$$\left(\frac{16}{25}\right)^{-\frac{3}{2}} =$$

(G)

$$\log_2(1) =$$

$$\log_2(2) =$$

$$\log_2(4) =$$

$$\log_2(8) =$$

$$\log_2(16) =$$

$$\log_2(32) =$$

(H)

$$\log_2(\frac{1}{2}) =$$

$$\log_2(\frac{1}{4}) =$$

$$\log_2(\frac{1}{8}) =$$

$$\log_2(\frac{1}{16}) =$$

(J)

$$\log_2(\sqrt[2]{2}) =$$

$$\log_2(\sqrt[3]{2}) =$$

$$\log_2(\sqrt[4]{2}) =$$

(K)

$$\log_2(\sqrt[3]{4}) =$$

$$\log_2(\sqrt[4]{8}) =$$

$$\log_2(\sqrt[5]{16}) =$$

(I)

$$\log_{10}(\frac{1}{1000}), \log_{10}(\frac{1}{100}), \log_{10}(\frac{1}{10}), \log_{10}(1), \log_{10}(10), \log_{10}(100), \log_{10}(1,000)$$

$$\log_{10}(10^n) =$$

Erase the "last" algebra on the left side of the equation by applying its inverse to the right side.

$$x-2 = e^{16}$$

$$e^{x+2} = 17$$

$$x+3 = \log_3(14)$$

$$\log_e(4x) = e^2 + 3$$

$$5x = e^2 - 7$$

$$e^{x+2} - 7 = 5$$

$$\frac{x}{7} = \log_e(3) + 2$$

$$2\log_e(5x) = e^7$$

$$e^x = e^2 - 3$$

$$e^{3x^2 - 17x + 2} - 4 = e^3$$

$$\log_e(x) = 7e^2$$

$$2\log_e(5x - 7) = e^2 + 1$$

$$e^x - 4 = 27$$

$$5e^{17x-4} + 2 = 8\log_3(25) - 1$$

$$\log_e(x) + 2 = e^6 - 1$$

$$2\log_e(5-4x) + 17 = 3 - e^{16}$$

$$\frac{e^x}{6} = \log_e(3) - 5$$

$$8e^{x+2} = 6$$

$$7\log_e(x) = 14$$

Complete the following rules for  $\log/\exp$  ( $a > 0, a \neq 1$ )

$$a^x a^y =$$

$$\frac{a^x}{a^y} =$$

$$(a^x)^y =$$

$$a^0 =$$

$$\log_a(z) + \log_a(w) =$$

$$\log_a(z) - \log_a(w) =$$

$$z \log_a(w) =$$

$$\log_a(1) =$$

$$\log_a(a^x) =$$

$$a^{\log_a(x)} =$$

$$a^{-x} =$$

$$\text{If } n, m \in \mathbb{N}, \quad a^{\frac{n}{m}} =$$